

Date: Thursday, 5/31/2007 7:23:16 AM
 User: Kim Johnston

POSITIVE RECALL

EFFECTIVE 07/06/07 AUTH LL

Process Sheet

Customer	CU-DAR001 Dart Helicopters Services	Drawing Name	STEP REVIEWED <u>07/06/07</u> DATE _____
Job Number	32718-1	Part Number	D3562041
Estimate Number	12576	Drawing Number	D3562 UNDER REVIEW
P.O. Number	N/A	Project Number	N/A
This Issue	5/31/2007	Drawing Revision	A
Prsht Rev.	NC	Material	N/A
First Issue	<u>N/A</u>	Due Date	6/11/2007
Previous Run	29411	Qty:	<u>4</u>
Written By	<u>JLM</u>	Um:	Each
Checked & Approved By	<u>JLM</u>		
Comment	Est Rev:A New Issue 06-11-09 JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	D2622120C	Extrusion	
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)	
		Qty Part # Description Batch:	
	1 D2622-120C Extrusion	<u>B31984</u>	
		Check Material for any Dents or Defects	<u>LL</u> 07.06.07
2.0	D2734	206 Step Endplate	
		Comment: Qty.: 2.0000 Each(s)/Unit Total : 10.0000 Each(s)	
		Pick:	
	Qty Part Number	Description Batch	
2	D2734	End Cap <u>329340 = 1</u> <u>330883 = 9</u>	<u>LL</u> 07.06.07
3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1	
		Comment: LARGE FABRICATION RESOURCE 1	
		1-Cut D2622 extrusion as per Dwg D3562	<u>LL</u> 07.06.07 ⑤
		2-Deburr and bevel ends for welding	<u>LL</u> 07.06.07 ④
		3-Weld (1)end cap as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.	<u>LL</u> 07.06.07 ④
		A/R Aluminum Rod <u>M102756</u>	
		4-Grind end cap welds flush as per Dwg D3562	<u>LL</u> 07.06.07 ④

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07.06.07	11	Remove qty(2) MS20600AD4W RIVETS TOTAL QTY NOW 34 REF. MARKED-UP DWG & DS EMAIL.				IP 07.06.07 P/C 051042	070607

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/31/2007 7:23:16 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: STEP WELDMENT
Job Number: 32718		Part Number: D3562041
Job Number:		
Seq. #:	Machine Or Operation:	Description :
4.0	QC5 <i>19</i>	INSPECT WORK TO CURRENT STEP <i>QC5 20706-07 (5)</i>
5.0	6.0 SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1 <i>drill</i> <i>& touch holes Alodide.</i> <i>up with</i> <i>Drill Rivet holes as per dwg D3562. USING DT 8956 n/a g/m.</i>
6.0	7.0 QC5	INSPECT WORK TO CURRENT STEP
8.0	5.0 HAND FINISHING1	HAND FINISHING RESOURCE #1
9.0	D3560041	INSPECT POWDER COAT/CHEMICAL CONVERSION <i>PP 07-06-07</i>
10.0	D3560043	ARM WELDMENT <i>SBS 07/06/07 (4)</i>
11.0	MS20600AD4W5	ARM WELDMENT <i>PE. 07-06-07 4</i>
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s) ARM WELDMENT Batch: <i>B32443</i>
		Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s) ARM WELDMENT Batch: <i>B32446</i>
		Comment: Qty.: 36.0000 Each(s)/Unit Total : 180.0000 Each(s) Blind Rivet <i>QTY X 34</i> batch: <i>207209 = 34</i> SEE W/CHNGE

W/O:

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/31/2007 7:23:16 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: STEP WELDMENT
Job Number: 32718		Part Number: D3562041
Job Number:		
Seq. #:	Machine Or Operation:	Description :
12.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
Comment: SMALL & MEDIUM FAB RESOURCE 1		
Rivet legs using Magnabond as per dwg D3562. Ensure to wipe off any excess magnabond of the step		<i>PL 07-06-13</i>
A/R	Magnabond 6398	Batch: <i>M103628</i>
13.0	QC5	INSPECT WORK TO CURRENT STEP
Comment: INSPECT WORK TO CURRENT STEP		<i>JULY 14 0</i>
		<i>Test fitted on A.K.</i>
14.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
Comment: LARGE FABRICATION RESOURCE 1		
1-Weld Remaining end cap as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI.024.		<i>PL 07-06-14</i>
A/R Aluminum Rod <i>M102756</i>		
2-Grind end cap welds flush as per Dwg D3562		<i>PL 07-06-14</i>
15.0	QC9	VISUAL WELDING INSPECTION
Comment: VISUAL WELDING INSPECTION		<i>PL 07-06-15</i>
16.0	QC5	INSPECT WORK TO CURRENT STEP
Comment: INSPECT WORK TO CURRENT STEP		<i>JULY 14 0</i>
		<i>LH</i>
17.0	POWDER COATING	POWDER COATING
Comment: POWDER COATING		<i>M 104 144</i>
Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3		<i>PL 07-06-15</i>
18.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
Comment: HAND FINISHING RESOURCE #1		
Wing Walk as per Dwg D3562 and QSI 005 4.4		
Batch: <i>M104281</i>		<i>m-f 07/06/15</i>

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07.06.07	19.5	PRESS IN D2808 SPACER AFTER POWDER COAT B/N _____	N/A				G 07.06.07 Rev QSI042	/07.06.07
			done on draw see D3560-041/043					

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: Date: 07/06/07
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/31/2007 7:23:16 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: STEP WELDMENT
Job Number: 32718	Part Number: D3562041	
Job Number:		
Seq. #:	Machine Or Operation:	Description :
19.0	QC3 	INSPECT POWDER COAT/CHEMICAL CONVERSION <i>Code 1/8/15 ②</i>
Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION		
20.0	PACKAGING 1 	PACKAGING RESOURCE #1 <i>* SEE W/D CHANGE FOR STEP 19.5</i>  
Comment: PACKAGING RESOURCE #1 Pick Assembly Kit	<i>C 7/6/15 59 ②</i>	
Job Completion		<i>QC 21 FINAL Inspection w/o release 07/06/15</i>
POSITIVE RECALL		
EFFECTIVE _____	AUTH _____	
RELEASED <i>W</i>	DATE <i>07/06/15</i>	

W/O:

WORK ORDER CHANGES

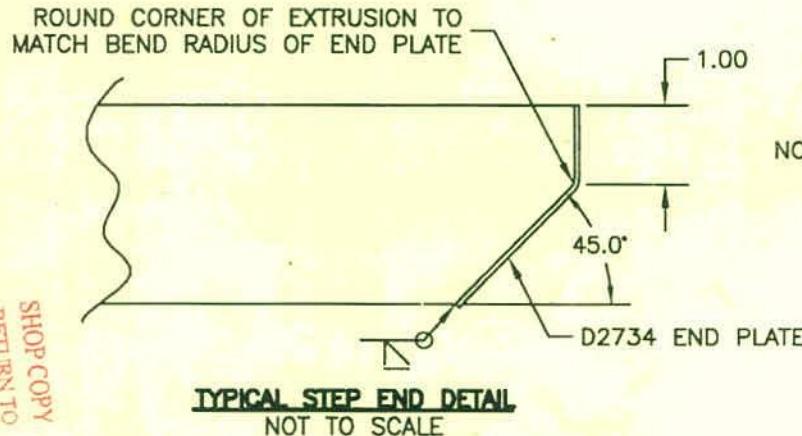
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

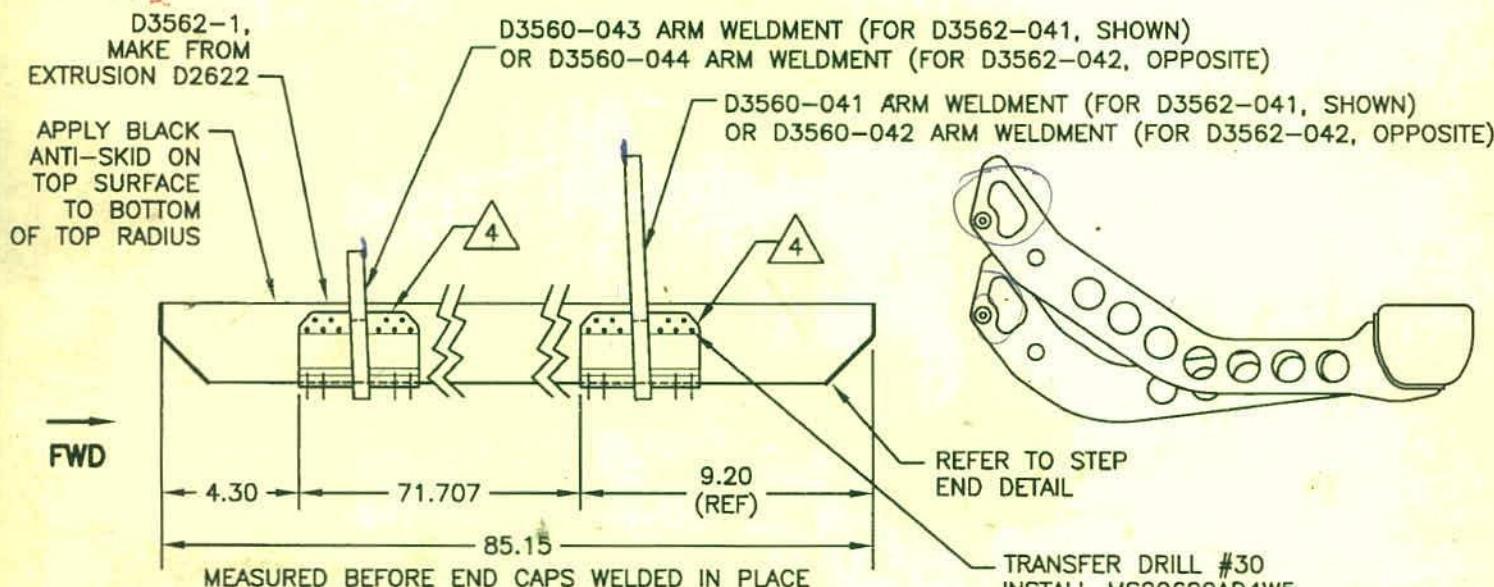
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 32718



NOTE: ALL WELDS SHALL BE 100% VISUALLY INSPECTED BY A QUALIFIED INSPECTOR PER DART QSI 004

DART

RELEASED
07.02.2007



D3562-041 LH STEP ASSEMBLY (SHOWN)

D3562-042 RH STEP ASSEMBLY (OPPOSITE)

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) WELD PER DART QSI 004
- 3) FINISH:

AFTER WELDING END PLATES AND PRIOR TO DRILLING/INSTALLING ARM WELDMENTS:

i) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

ii) POWDER COAT GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6)

OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4

- 4) INSTALL ARM WELDMENTS WITH A LAYER OF SIKAFLEX-241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS-B2 SEALANT BETWEEN THE ARM WELDMENT AND STEP EXTRUSION
- 5) ALL DIMENSIONS ARE IN INCHES

MAGNAIRND

P07.06.07

REF DS EMAIL

DESIGN		DRAWN BY	DART AEROSPACE LTD	
CHECKED	APPROVED		DRAWING NO.	HAWKESBURY, ONTARIO, CANADA
DATE			TITLE	SCALE
07.01.15			D3562	SHEET 1 OF 1
A	06.09.26		STEP ASSEMBLY	NTS
B	07.01.15		ARMS NOW RIVETED TO STEP	NTS



Chris Provencal

From: David Shepherd [dshepherd@dartaero.com]
Sent: June 5, 2007 5:18 PM
To: 'Chris Provencal'
Subject: RE: D3562-041/-042

As we have discussed previously, this is acceptable as long as the Magnabond doesn't break down.

David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: Tuesday, June 05, 2007 11:00 AM
To: David Shepherd (David Shepherd)
Subject: D3562-041/-042

David

For the D3562-041/-042 step weldment, as discussed. They want to switch from Sikaflex to Magnabond, and powder coat after final assembly.

As part of this change, the D3560-XX arms won't be powder coated, and the D2808 Bushing won't be assembled until after final assembly of the step weldment.

Since this is the first time trying this, we will ensure that the steps are checked after powdercoating in case the Magnabond doesn't anything unexpected (eg. bubbling). If we see anything suspect, we will assemble them the old way.

Is this acceptable.

-Chris

No virus is found in this incoming message.

Checked by AVG Free Edition.

Version: 7.5.472 / Virus Database: 269.8.9/834 - Release Date: 6/5/2007 2:38 PM

No virus is found in this outgoing message.

Checked by AVG Free Edition.

Version: 7.5.472 / Virus Database: 269.8.9/834 - Release Date: 6/5/2007 2:38 PM



Chris Provencal

From: David Shepherd [dshepherd@dartaero.com]
Sent: June 5, 2007 12:26 PM
To: 'Chris Provencal'
Subject: RE: D3560-041/-042/-043/-044

Go ahead.

David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: Tuesday, June 05, 2007 9:55 AM
To: David Shepherd (David Shepherd)
Subject: D3560-041/-042/-043/-044

David,

This is sort of a rush: dwg D3560 Rev.B (step weldment for -033/-034 steps) is not calling up the D2808 Bushing. It is missing the "Press fit D2808 Bushing after powder coat".

We will correct this, but for the time being: is it acceptable to press fit a D2808 Bushing into the D3560-041/-042/-043/-044 as the design originally intended?

-Chris

No virus found in this incoming message.

Checked by AVG Free Edition.

Version: 7.5.472 / Virus Database: 269.8.9/834 - Release Date: 6/5/2007 2:38 PM

No virus found in this outgoing message.

Checked by AVG Free Edition.

Version: 7.5.472 / Virus Database: 269.8.9/834 - Release Date: 6/5/2007 2:38 PM



Chris Provencal

From: David Shepherd [dshepherd@dartaero.com]
Sent: June 7, 2007 3:37 PM
To: 'Chris Provencal'
Subject: RE: D3562-041/-042

As we discussed, I think this change is acceptable without further qualification.

David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: Thursday, June 07, 2007 1:15 PM
To: David Shepherd (David Shepherd)
Subject: D3562-041/-042

David,

For the D3562-041/-042 Step Assembly, we need to remove qty(1) rivet from each D3560-XX Arm weldments attachments for manufacturability. There will be a total qty(34) MS20600AD4 rivets instead of qty(36) per step. The rivet will be removed from the side surface of the step. Remaining shear would be 350 lbs x 16 rivets = 5600 lbs per arm attachments.

-Chris

No virus found in this incoming message.

Checked by AVG Free Edition.

Version: 7.5.472 / Virus Database: 269.8.11/838 - Release Date: 6/7/2007 2:21 PM

No virus found in this outgoing message.

Checked by AVG Free Edition.

Version: 7.5.472 / Virus Database: 269.8.11/838 - Release Date: 6/7/2007 2:21 PM

